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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/614,337

07/08/2003

Clement Robertson

060707-1340

7877

24504 7590 02/16/2007

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EXAMINER

KANG, SUK JIN

ART UNIT

PAPER NUMBER

2609

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/614,337

Applicant(s)

ROBERTSON, CLEMENT

Examiner

Suk Jin Kang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/19/03 and 8/23/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Applicant's claim for domestic priority under 35 U.S.C. 119 (e) is acknowledged.

Information Disclosure Statement

2. The information disclosure statements submitted on November 19, 2003 and August 23, 2004 have been considered by the Examiner and made of record in the application.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 1-8, 10, 11-18, and 20-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hann et al. (U.S. Patent # 6,535,520 B1)** in view of **Tzannes et al. (U.S. Patent Application Publication # 2003/0091053 A1)**.

Consider **claim 1**, Hann et al. disclose a method for prioritizing status polling based on connection speed (column 3 lines 24-31 and column 4 lines 4-9), the method comprising the steps of: determining a number of fast connection PHY addresses (column 1 lines 38-40 and column 3 lines 45-48); determining a number of slow connection PHY addresses (column 1 lines 38-40 and column 3 lines 45-48); and arbitrating status polling (column 1 lines 48-53), but does not expressly disclose calculating a poll ratio based on the number of fast connection PHY addresses and the number of slow connection PHY addresses and status polling based at least in part on the poll ratio for at least one polling period.

In the same field of endeavor, Tzannes et al. disclose calculating a poll ratio based on the number of fast connection PHY addresses and the number of slow

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connection PHY addresses and status polling based at least in part on the poll ratio for at least one polling period ([0043], [0044], and [0046]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate calculating a poll ratio and basing status polling on the poll ratio as taught by Tzannes et al. with the method for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

Consider **claim 2**, and **as applied to claim 1 above**, Hann et al., as modified by Tzannes et al., disclose the method wherein one or both of the fast connection PHY addresses and the slow connection PHY addresses are software configurable (column 1 lines 54-60).

Consider **claim 3**, and **as applied to claim 2 above**, Hann et al., as modified by Tzannes et al., disclose the method wherein the fast connection PHY address is configured to be approximately 155 Mb/s link (column 2 lines 61-67).

Consider **claim 4**, and **as applied to claim 2 above**, Hann et al., as modified by Tzannes et al., disclose the method wherein the slow connection PHY address is configured to be a T1/E1 1 Mb/s to 2/5 Mb/s link (column 2 lines 61-67).

Consider **claim 5**, and **as applied to claim 1 above**, Hann et al., as modified by Tzannes et al., disclose the claimed invention according to claim 1, but does not expressly disclose the method wherein the poll ratio comprises a plurality of poll ratios.

Nonetheless, Tzannes et al. also teach the method wherein the poll ratio comprises a plurality of poll ratios ([0043], [0044], and [0046]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a plurality of poll ratios as taught by Tzannes et al. with the method for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

Consider **claim 6**, and **as applied to claim 1 above**, Hann et al., as modified by Tzannes et al., disclose the method wherein the polling is restricted to the PHY addresses that are connected (column 5 lines 7-8).

Consider **claim 7**, and **as applied to claim 1 above**, Hann et al., as modified by Tzannes et al., disclose the method wherein status polling is arbitrated at a different poll ratio for each polling period (figure 3A).

Consider **claim 8**, and **as applied to claim 5 above**, Hann et al., as modified by Tzannes et al., disclose the claimed invention according to claim 1, but does not expressly disclose the method wherein the poll ratios include 0/100, 25/75, 50/50, 75/25, 100/0 wherein each poll ratio represents fast connections to slow connections.

Nonetheless, Tzannes et al. also teach the method wherein the poll ratios include 0/100, 25/75, 50/50, 75/25, 100/0 wherein each poll ratio represents fast connections to slow connections ([0043], [0044], and [0046]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a plurality of poll ratios as taught by Tzannes et al. with the method for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

Consider **claim 8**, again, and **as applied to claim 5 above**, Hann et al., as modified by Tzannes et al., disclose the claimed invention according to claim 1, but does not expressly disclose the method wherein the poll ratios include 0/100, 25/75, 50/50, 75/25, 100/0 wherein each poll ratio represents fast connections to slow connections.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate a diversity of poll ratios representing fast to slow connections. Applicant has not disclosed that poll ratios of 0/100, 25/75, 50/50, 75/25, 100/0 provide an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a poll ratio of 8/2 ([0044]) because it would allow a fast connection disproportionately frequent access to the bus.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a plurality of poll ratios as taught by Tzannes et al. with the method for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

Consider **claim 10**, and **as applied to claim 1 above**, Hann et al., as modified by Tzannes et al., disclose the claimed invention according to claim 1, but does not expressly disclose the method wherein the poll ratio is further based on one or more of a number of connections, type of connection and bandwidth distribution.

Nonetheless, Tzannes et al. also teach the method wherein the poll ratio is further based on one or more of a number of connections, type of connection and bandwidth distribution ([0043], [0044], and [0046]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a poll ratios based on one or more of a number of connections, type of connection and bandwidth distribution as taught by Tzannes et al. with the method for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

Consider **claim 11**, Hann et al. disclose a system for prioritizing status polling based on connection speed (column 1 lines 38-40 and column 3 lines 26-31), the system comprising: a number of fast connection PHY addresses and the number of slow connection PHY addresses (column 1 lines 38-40 and column 3 lines 45-48) and an arbitrate status polling module (arbiter, 26, figure 1, column 3 line 47-48), but does not expressly disclose a poll ratio module for calculating a poll ratio and arbitrating status polling based at least in part on the poll ratio for at least one polling period.

In the same field of endeavor, Tzannes et al. disclose a poll ratio module for calculating a poll ratio and arbitrating status polling based at least in part on the poll ratio for at least one polling period ([0043], [0044], and [0046]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate calculating a poll ratio and basing status polling on the poll ratio as taught by Tzannes et al. with the system for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

Consider **claim 12**, and **as applied to claim 11 above**, Hann et al., as modified by Tzannes et al., disclose the system wherein one or both of the fast connection PHY addresses and the slow connection PHY addresses are software configurable (column 1 lines 54-60).

Consider **claim 13**, and **as applied to claim 12 above**, Hann et al., as modified by Tzannes et al., disclose the system wherein the fast connection PHY address is configured to be approximately 155 Mb/s link (column 2 lines 61-67).

Consider **claim 14**, and **as applied to claim 12 above**, Hann et al., as modified by Tzannes et al., disclose the system wherein the slow connection PHY address is configured to be a T1/E1 1 Mb/s to 2/5 Mb/s link (column 2 lines 61-67).

Consider **claim 15**, and **as applied to claim 11 above**, Hann et al., as modified by Tzannes et al., disclose the claimed invention according to claim 11, but does not expressly disclose the system wherein the poll ratio comprises a plurality of poll ratios.

Nonetheless, Tzannes et al. also teach the system wherein the poll ratio comprises a plurality of poll ratios ([0043], [0044], and [0046]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a plurality of poll ratios as taught by Tzannes et al. with the system for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

Consider **claim 16**, and **as applied to claim 11 above**, Hann et al., as modified by Tzannes et al., disclose the system wherein the polling is restricted to the PHY addresses that are connected (column 5 lines 7-8).

Consider **claim 17**, and **as applied to claim 11 above**, Hann et al., as modified by Tzannes et al., disclose the system wherein status polling is arbitrated at a different poll ratio for each polling period (figure 3A).

Consider **claim 18**, and **as applied to claim 15 above**, Hann et al., as modified by Tzannes et al., disclose the claimed invention according to claim 1, but does not expressly disclose the system wherein the poll ratios include 0/100, 25/75, 50/50, 75/25, 100/0 wherein each poll ratio represents fast connections to slow connections.

Nonetheless, Tzannes et al. also teach the system wherein the poll ratios include 0/100, 25/75, 50/50, 75/25, 100/0 wherein each poll ratio represents fast connections to slow connections ([0043], [0044], and [0046]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a plurality of poll ratios as taught by Tzannes et al. with the system for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

Consider **claim 18**, again, and **as applied to claim 15 above**, Hann et al., as modified by Tzannes et al., disclose the claimed invention according to claim 1, but does not expressly disclose the system wherein the poll ratios include 0/100, 25/75, 50/50, 75/25, 100/0 wherein each poll ratio represents fast connections to slow connections.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate a diversity of poll ratios representing fast to slow connections. Applicant has not disclosed that poll ratios of 0/100, 25/75, 50/50, 75/25,

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100/0 provide an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a poll ratio of 8/2 ([0044]) because it would allow a fast connection disproportionately frequent access to the bus.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a plurality of poll ratios as taught by Tzannes et al. with the system for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

Consider **claim 20**, and **as applied to claim 11 above**, Hann et al., as modified by Tzannes et al., disclose the claimed invention according to claim 1, but does not expressly disclose the system wherein the poll ratio is further based on one or more of a number of connections, type of connection and bandwidth distribution.

Nonetheless, Tzannes et al. also teach the system wherein the poll ratio is further based on one or more of a number of connections, type of connection and bandwidth distribution ([0043], [0044], and [0046]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a poll ratios based on one or more of a number of connections, type of connection and bandwidth distribution as taught by Tzannes et al. with the system for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

Consider **claim 21**, Hann et al. disclose a computer readable medium (arbiter, figure 1), the computer readable medium comprising a set of instructions for prioritizing

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status polling based on connection speed and being adapted to manipulate a processor to (column 1 lines 54-60): determining a number of fast connection PHY addresses (column 1 lines 38-40 and column 3 lines 45-48); determining a number of slow connection PHY addresses (column 1 lines 38-40 and column 3 lines 45-48); and arbitrating status polling (column 1 lines 48-53), but does not expressly disclose calculating a poll ratio based on the number of fast connection PHY addresses and the number of slow connection PHY addresses and status polling based at least in part on the poll ratio for at least one polling period.

In the same field of endeavor, Tzannes et al. disclose calculating a poll ratio based on the number of fast connection PHY addresses and the number of slow connection PHY addresses and status polling based at least in part on the poll ratio for at least one polling period ([0043], [0044], and [0046]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate calculating a poll ratio and basing status polling on the poll ratio as taught by Tzannes et al. with the computer readable medium comprising instructions for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

7. **Claims 9 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hann et al. (U.S. Patent # 6,535,520 B1)** in view of **Tzannes et al. (U.S. Patent Application Publication # 2003/0091053 A1)**, and in further view of **Nichols et al. (U.S. Patent 6,356,557 B1)**.

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Consider **claim 9**, and **as applied to claim 1 above**, Hann et al., as modified by Tzannes et al., disclose the claimed invention according to claim 1, but does not expressly disclose the method wherein the polling period comprises a two clock cycle polling.

In the same field of endeavor, Nichols et al. disclose the method wherein the polling period comprises a two clock cycle polling (column 4 lines 43-47 and column 6 lines 1-5).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a polling period of two clock cycles as taught by Nichols et al. with the method for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

Consider **claim 19**, and **as applied to claim 11 above**, Hann et al., as modified by Tzannes et al., disclose the claimed invention according to claim 11, but does not expressly disclose the system wherein the polling period comprises a two clock cycle polling.

In the same field of endeavor, Nichols et al. disclose the system wherein the polling period comprises a two clock cycle polling (column 4 lines 43-47 and column 6 lines 1-5).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate a polling period of two clock cycles as taught by Nichols et al. with the system for prioritizing status polling as disclosed by Hann et al. for the purpose of improving polling efficiency.

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Conclusion

8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

a) (U.S. Patent # 5,625,625) disclose METHOD AND APPARTUS FOR PARTITIONING DATA LOAD AND UNLOAD FUNCTIONS WITHIN AN INTERFACE SYSTEM FOR USE WITH AN AYSNCHRONOUS TRANSFER MODE SYSTEM

9. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Suk Jin Kang whose telephone number is (571) 270-1771. The examiner can normally be reached on Monday - Friday 8:00-5:00 EST.

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Perez-Gutierrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Suk Jin Kang
S.J.K./sjk

February 7, 2007


RAFAEL PEREZ-GUTIERREZ
SUPERVISORY PATENT EXAMINER
2/13/07